



## Teacher Learning Report Grade 5 Math

### Whole Number Operations

- 5.3 Number and operations.** The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy.
- 5.4 Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations.

Unit	CHECKPOINT		
	1	2	3

### Process (Tools to Know)

- 5.1(A) apply math in everyday situations <sup>Ⓢ</sup>
- 5.1(B) use problem-solving models <sup>Ⓢ</sup> *connected 5.1(C)*

Unit	CHECKPOINT		
	1	2	3

### Content

#### Estimation of Whole Numbers

- 5.3(A) estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division

Unit	CHECKPOINT		
	1	2	3

#### Addition/Subtraction of Whole Numbers

- 5.3(K) add and subtract positive rational numbers fluently

	Data included in "Decimals"		

#### Multiplication/Division of Whole Numbers

- 5.3(B) multiply with fluency a three-digit number by a two-digit number using the standard algorithm
- 5.3(C) solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm


#### Numerical Expressions

- 5.4(F) simplify numerical expressions that do not involve exponents, including up to two levels of grouping
- 5.4(E) describe the meaning of parentheses and brackets in a numeric expression

	Data included in "Decimals"		

#### All Operations of Whole Numbers

- 5.4(B) represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity <sup>Ⓢ</sup>


### Process (Ways to Show)

- 5.1(E) create representations

Unit	CHECKPOINT		
	1	2	3



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## Teacher Learning Report Grade 5 Math

5.1(F) analyze information ⓘ

*connected 5.1(D), 5.1(G)*

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## Teacher Learning Report Grade 5 Math

### >> Decimals

- 5.2 Number and operations.** The student applies mathematical process standards to represent, compare, and order positive rational numbers and understand relationships as related to place value.
- 5.3 Number and operations.** The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy.
- 5.4 Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations.

Unit	CHECKPOINT		
	1	2	3

### Process (Tools to Know)

- 5.1(A) apply math in everyday situations Ⓢ
- 5.1(B) use problem-solving models Ⓢ *connected 5.1(C)*

Unit	CHECKPOINT		
	1	2	3

### Content

#### Representation of Decimals

- 5.2(A) represent the value of the digit in decimals through the thousandths using expanded notation and numerals

Unit	CHECKPOINT		
	1	2	3

#### Comparison of Decimals

- 5.2(B) compare and order two decimals to thousandths and represent comparisons using the symbols  $>$ ,  $<$ , or  $=$  Ⓢ

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#### Estimation of Decimals

- 5.2(C) round decimals to tenths or hundredths
- 5.3(A) estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division

	Data included in "Whole Number Operations"		

#### Addition/Subtraction of Decimals

- 5.3(K) add and subtract positive rational numbers fluently

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#### Multiplication of Decimals

- 5.3(E) solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers
- 5.3(D) represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models

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#### Division of Decimals

- 5.3(G) solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm
- 5.3(F) represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models

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#### Numerical Expressions

- 5.4(F) simplify numerical expressions that do not involve exponents, including up to two levels of grouping
- 5.4(E) describe the meaning of parentheses and brackets in a numeric expression

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## Teacher Learning Report Grade 5 Math

Process (Ways to Show)	Unit	CHECKPOINT		
		1	2	3
5.1(E) create representations 5.1(F) analyze information <sup>Ⓢ</sup>				

*connected 5.1(D), 5.1(G)*

>> *TEKS clusters typically requiring additional time and focus in the curriculum*



## Teacher Learning Report Grade 5 Math

### >> Fractions

**5.3 Number and operations.** The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy.

Connected Knowledge and Skills 5.4

Unit	CHECKPOINT		
	1	2	3

### Process (Tools to Know)

5.1(A) apply math in everyday situations <sup>Ⓢ</sup>  
5.1(B) use problem-solving models <sup>Ⓢ</sup>

connected 5.1(C)

Unit	CHECKPOINT		
	1	2	3

### Content

#### Estimation of Fractions

5.3(A) estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division

Data included in "Whole Number Operations"

#### Addition/Subtraction of Fractions

5.3(K) add and subtract positive rational numbers fluently

Data included in "Decimals"

5.3(H) represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations

5.4(A) identify prime and composite numbers

#### Multiplication of Fractions

5.3(I) represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models

#### Division of Fractions

5.3(L) divide whole numbers by unit fractions and unit fractions by whole numbers

5.3(J) represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as  $1/3 \div 7$  and  $7 \div 1/3$  using objects and pictorial models, including area models

### Process (Ways to Show)

5.1(E) create representations  
5.1(F) analyze information <sup>Ⓢ</sup>

connected 5.1(D), 5.1(G)

Unit	CHECKPOINT		
	1	2	3

>> TEKS clusters typically requiring additional time and focus in the curriculum



## Teacher Learning Report Grade 5 Math

### Graphing on Coordinate Plane

- 5.4 Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations.
- 5.8 Geometry and measurement.** The student applies mathematical process standards to identify locations on a coordinate plane.

Unit	CHECKPOINT		
	1	2	3

### Process (Tools to Know)

- 5.1(A) apply math in everyday situations ⑧
- 5.1(B) use problem-solving models ⑧ *connected 5.1(C)*

Unit	CHECKPOINT		
	1	2	3

### Content

#### Coordinate Plane

- 5.8(C) graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table
- 5.8(A) describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the  $x$ -coordinate, the first number in an ordered pair, indicates movement parallel to the  $x$ -axis starting at the origin; and the  $y$ -coordinate, the second number, indicates movement parallel to the  $y$ -axis starting at the origin
- 5.8(B) describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane

Unit	CHECKPOINT		
	1	2	3

#### Graphing Numerical Patterns

- 5.4(C) generate a numerical pattern when given a rule in the form  $y = ax$  or  $y = x + a$  and graph ⑧
- 5.4(D) recognize the difference between additive and multiplicative numerical patterns given in a table or graph

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### Process (Ways to Show)

- 5.1(E) create representations
- 5.1(F) analyze information ⑧ *connected 5.1(D), 5.1(G)*

Unit	CHECKPOINT		
	1	2	3



## Teacher Learning Report Grade 5 Math

### >> Geometry and Measurement

- 5.5 Geometry and measurement.** The student applies mathematical process standards to classify two-dimensional figures by attributes and properties.
- 5.6 Geometry and measurement.** The student applies mathematical process standards to understand, recognize, and quantify volume.
- 5.7 Geometry and measurement.** The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement.

Connected Knowledge and Skills 5.4

Unit	CHECKPOINT		
	1	2	3

### Process (Tools to Know)

- 5.1(A) apply math in everyday situations ③
- 5.1(B) use problem-solving models ③ *connected 5.1(C)*

Unit	CHECKPOINT		
	1	2	3

### Content

#### Two-Dimensional

- 5.5(A) classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties ③

#### Perimeter/Area/Volume

- 5.4(H) represent and solve problems related to perimeter and/or area and related to volume ③
- 5.6(A) recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes ( $n$  cubic units) needed to fill it with no gaps or overlaps if possible
- 5.6(B) determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base
- 5.4(G) use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism, including the special form for a cube ( $V = l \times w \times h$ ,  $V = s \times s \times s$ , and  $V = Bh$ ) ③

#### Conversions

- 5.7(A) solve problems by calculating conversions within a measurement system, customary or metric

Unit	CHECKPOINT		
	1	2	3

### Process (Ways to Show)

- 5.1(E) create representations
- 5.1(F) analyze information ③ *connected 5.1(D), 5.1(G)*

Unit	CHECKPOINT		
	1	2	3

>> TEKS clusters typically requiring additional time and focus in the curriculum



## Teacher Learning Report Grade 5 Math

Data Analysis	Unit	CHECKPOINT		
		1	2	3
5.9 <b>Data analysis.</b> The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data.				

  

Process (Tools to Know)	Unit	CHECKPOINT		
		1	2	3
5.1(A) apply math in everyday situations ⑧				
5.1(B) use problem-solving models ⑧ <i>connected 5.1(C)</i>				

  

Content	Unit	CHECKPOINT		
		1	2	3
<b>Representation of Data</b>				
5.9(A) represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots				
5.9(B) represent discrete paired data on a scatterplot				
<b>Interpretation of Data</b>				
5.9(C) solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot ⑧				

  

Process (Ways to Show)	Unit	CHECKPOINT		
		1	2	3
5.1(E) create representations				
5.1(F) analyze information ⑧ <i>connected 5.1(D), 5.1(G)</i>				





## Teacher Learning Report Grade 5 Math

Personal Financial Literacy	Unit	CHECKPOINT		
		1	2	3
<b>5.10 Personal financial literacy.</b> The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security.				

Process (Tools to Know)	Unit	CHECKPOINT		
		1	2	3
5.1(A) apply math in everyday situations <sup>Ⓢ</sup> 5.1(B) use problem-solving models <sup>Ⓢ</sup> <i>connected 5.1(C)</i>				

Content	Unit	CHECKPOINT		
		1	2	3
<b>Budgets</b>				
5.10(E) describe actions that might be taken to balance a budget when expenses exceed income				
5.10(F) balance a simple budget				
5.10(C) identify the advantages and disadvantages of different methods of payment, including check, credit card, debit card, and electronic payments				
5.10(D) develop a system for keeping and using financial records				

<b>Taxes</b>				
5.10(A) define income tax, payroll tax, sales tax, and property tax				
5.10(B) explain the difference between gross income and net income				

Process (Ways to Show)	Unit	CHECKPOINT		
		1	2	3
5.1(E) create representations 5.1(F) analyze information <sup>Ⓢ</sup> <i>connected 5.1(D), 5.1(G)</i>				



## Teacher Learning Report Grade 5 Math

PROCESS STANDARDS: MATHEMATICAL PROCESS STANDARDS		Unit	CHECKPOINT		
			1	2	3
5.1	The student uses mathematical processes to acquire and demonstrate mathematical understanding.	Tools to Know			
		Ways to Show			

TOOLS TO KNOW		Unit	CHECKPOINT		
			1	2	3
5.1(A)	apply mathematics to problems arising in everyday life, society, and the workplace ⑧				
5.1(B)	use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution ⑧				
5.1(C)	select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems				

WAYS TO SHOW		Unit	CHECKPOINT		
5.1(D)	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate				
5.1(E)	create and use representations to organize, record, and communicate mathematical ideas				
5.1(F)	analyze mathematical relationships to connect and communicate mathematical ideas ⑧				
5.1(G)	display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication				